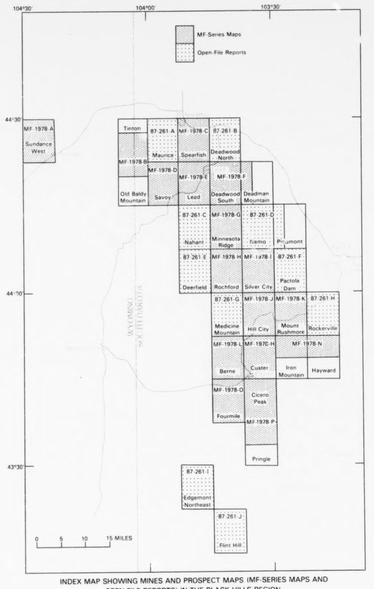
DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



INDEX MAP SHOWING MINES AND PROSPECT MAPS (MF-SERIES MAPS AND OPEN-FILE REPORTS) IN THE BLACK HILLS REGION

EXPLANATION

Mine--Location known. Distinguished from prospect by name of mine and size of symbol. Alternate names or synonyms in parentheses. If there is enough space on the map, the entire mine name and synonyms are shown; otherwise, mine name may be abbreviated and synonyms deleted from map. Full mine names and all synonyms are shown in the "Alphabetic list of mines"

◆ **Open pit or other type of opening**

◇ **Mine**--Approximate location shown. Open pit, shaft, adit, or other type of opening

Prospect

X **Pit**

\+ **Multiple pits**

Patented claim--See alphabetic and numeric lists of patented claims. Asterisk (*) indicates part of claim extends into adjacent quadrangle. Dollar sign ($) indicates most of claim in adjacent quadrangle. Boundaries between claims not shown

002 **Lode claim**--Orientation of number parallel to long axis of claim

0048 **Placer claim**--Number approximately in center of claim

Locations of prospects in this quadrangle were taken from Darton and Paige (1925) and Norton (1976). Because many quadrangles, or parts of quadrangles, have not been mapped in as much detail as other quadrangles, comparison of the density of prospects from one quadrangle to another, or even within one quadrangle, is not warrante.. As an example, part of a quadrangle may be shown on the map as having more prospects than another part, but the first part may have been mapped in greater detail than the second part. Similarly, a part of a quadrangle may have many prospects that are not shown on this map because the original source of information did not show prospect pits.

Geologic data for the map are from Aho (1974), Aspouri (1939), Connolly (1925), Connolly and O'Harra (1929), Darton and Paige (1925), DeWitt and others (1986), Dheeradilok (1971), Kleinkopf and Redden (1975), Lisenbee (1985), Norton (1974, 1976), Norton and Sheridan (1955), Norton and others (1964), Page and others (1953), Raymond (1981), P. H. Rahn (unpub. data, 1986), Redden (1975), Redden and Norton (1975), and Zeitner (1977).

PRECISION OF LOCATION INFORMATION

All mine symbols except the unfilled diamond (◇) indicate that the location of the deposit is known within a 200-foot radius. The type of opening at a mine (adit, shaft, open pit, trench, and others) is designated by one of ten different symbols. The unfilled diamond symbol indicates that the location is known only to within a 1/4 mile radius, and that the type of mine opening is unknown.

Mines and prospects whose locations could not be verified to within less than a 1/4 mile radius were not plotted on the map.

PATENTED CLAIM AND MINE LISTS

Patented mining claims are listed both numerically and alphabetically. Mines are listed alphabetically. For ease in locating the claim or mine on the map, the legal description (section, township, range) is given.

Each patented claim on the map is represented by a number keyed to the numeric and alphabetic listings. Where possible, the claim numbers are plotted approximately in the center of the claim and parallel to its long axis. Boundaries between adjacent claims are not shown. An asterisk (*) following a claim number indicates that most of the claim is in this quadrangle, but it extends into the adjacent quadrangle. A dollar sign ($) following a claim number indicates that most of the claim is in the adjacent quadrangle, but part of it is in this quadrangle. Claims outlined with a solid line are patented lode claims; claims outlined with a dotted line are patented placer claims. Many placer workings on unpatented claims have not been plotted on the maps, principally because the workings lacked a name.

On the map, the most common or most used name of a mine is normally next to its mine symbol. If there is space, any alternate names or synonyms are in parentheses following the most common name. On some maps, where space does not permit showing the first name or any alternate names, the names are shown by a single letter, two letters, or an abbreviation of the name; the mines are keyed to that letter or abbreviation in the alphabetic and numeric lists. Mines with more than one name have the alternate name(s) or synonym(s) shown in parentheses in the alphabetic lists. The first alternate name or synonym is also alphabetized in the alphabetic list of mines; second or third alternate names may not be alphabetized. Uncertain alternate names are not alphabetized and are followed by a query (?).

CLASSIFICATION OF MINES AND DEPOSITS

Mines and deposits are categorized according to geologic criteria of age, environment of formation, and contained metals, as in DeWitt and others (1986, p. 52-53). Deposit-type letter designations (E, G, and so on) corresponding to those in DeWitt and others (1986) for deposit types are used in the alphabetic list of mines. The criteria used for the deposit types are briefly summarized below and are explained more fully in DeWitt and others (1986).

PRINCIPAL TYPES OF DEPOSITS

E, F, G, H, I, and J--Proterozoic pegmatites were formed in an igneous and metamorphic environment about 1.6-1.8 Ga (billion years ago). Hydrothermal solutions from the Harney Peak Granite concentrated lithium, beryllium, tin, and tungsten in the surrounding metamorphic rocks and the granite. Large deposits of feldspar- and muscovite-rich rock were similarly formed in the granite. E, deposits rich in feldspar; F, pegmatites rich in tin and tungsten; G, lithium-rich deposits; H, potassium-feldspar- and mica-rich pegmatites; I, pegmatites with large amounts of mica; J, beryllium-rich deposits.

Q--Tertiary and Recent placers are bedded sedimentary deposits of gold and cassiterite formed in a terrestrial environment by rivers and streams transporting and concentrating heavy minerals in stream channels.

R--Cambrian colluvium is a stratabound deposit of iron formed in a surface weathering environment about 500 Ma. Extensive weathering and minimal transport of the underlying Precambrian rocks resulted in accumulations of iron-rich debris and fine-grained material near the base of the Cambrian strata.

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Alphabetic list of mines

[Deposit-type letter designations are explained in the text]

Deposit Type	Name of Mine	Location
E	Barker-Ferguson	Sec. 14 T2S R6E
K	Battle Creek-Foster Gulch	Sec. 13 T2S R6E
K	Giltedge	Sec. 11 T2S R6E
	Gravel Pit	Sec. 33 T1S R7E
G,E	Nichols (Star Lode)	Sec. 13 T2S R6E
K	Rattlesnake	Sec. 11 T2S R6E
Q	Rockerville Placer Workings	Sec. 18 T1S R7E
G,E	Star Lode (Nichols)	Sec. 13 T2S R6E
G	Tiger Lode	Sec. 12 T2S R6E

Alphabetic list of patented claims

[Asterisk (*) indicates that part of claim extends into adjacent quadrangle; dollar sign ($) indicates that most of claim is in the adjacent quadrangle]

Claim number	Name of Claim	Location
001*	Boland Placer	Sec. 2 T1S R6E
003	Bonanza Placer	Sec. 12 T1S R6E
006$	Dan Patch	Sec. 14 T1S R6E
002$	Deadman Placer	Sec. 2 T1S R6E
007	Johnson Placer	Sec. 13 T1S R6E
004*	Nevada	Sec. 14 T1S R6E
005*	Ponca	Sec. 14 T2S R6E
009*	Ponca No.1	Sec. 14 T2S R6E
008*	Star	Sec. 13 T2S R6E
004	Utah	Sec. 14 T1S R6E

Numerical list of patented claims

[Asterisk (*) indicates that part of claim extends into adjacent quadrangle; dollar sign ($) indicates that most of claim is in the adjacent quadrangle]

Claim number	Name of Claim	Location
001*	Boland Placer	Sec. 2 T1S R6E
002$	Deadman Placer	Sec. 2 T1S R6E
003	Bonanza Placer	Sec. 12 T1S R6E
004	Utah	Sec. 14 T1S R6E
005*	Red Cross	Sec. 14 T1S R6E
006*	Nevada	Sec. 14 T1S R6E
006$	Dan Patch	Sec. 14 T1S R6E
007	Johnson Placer	Sec. 13 T1S R6E
008*	Star	Sec. 13 T2S R6E
009*	Ponca No.1	Sec. 14 T2S R6E
010*	Ponca	Sec. 14 T2S R6E

OPEN-FILE REPORT
OF 87-261-H

Base from U.S. Geological Survey, 1968

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature

MAP OF MINES, PROSPECTS, AND PATENTED MINING CLAIMS, AND CLASSIFICATION OF MINERAL DEPOSITS IN THE ROCKERVILLE 7 ½ MINUTE QUADRANGLE, BLACK HILLS, SOUTH DAKOTA

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1988